

regard to life and cerebral functions. 4. Strict antiseptic precautions prevent any development of traumatic meningitis. 5. Healing of cut wounds of the brain takes place through the formation of a connective tissue scar. 6. The latter is formed both by leucocytes migrating from blood-vessels, and especially by proliferating connective tissue elements of the meninges (mainly of the pia). 7. In cases of cut wounds, degenerative changes of nerve elements in the white substance and deeper cortical layers are pronounced in a by far more considerable degree than in superficial strata of the cortex. 8. In cases of incised wounds in rabbits, cariokinetic phenomena are observed both in nerve-cells and in elements of neuroglia and connective tissue. In dog, they are limited to connective tissue elements alone. 9. A strict antiseptic management of cerebral wounds gives relatively favorable results in man, too.—*Vratch*, No. 2, 1889.

**II. Trephining for Traumatic Lesions of the Skull.**—By DR. HERMANN TH. ZEIDLER (St. Petersburg, Russia). During the last  $2\frac{1}{2}$  years there were admitted to the Obukhovsky Hospital 38 cases of traumatic lesions of the skull, of which in 23 the cranial vault was injured (5 cases referred to compound fissures, 2 to subcutaneous fractures, and 16 to compound fractures). In 7 cases, primary trephining was performed, with 3 recoveries and 4 deaths; and in 3 secondary, with 2 recoveries and 1 death. The remaining 13 cases were treated without trephining; 9 of them recovered, 4 died.

In 7 out of the 9 fatal cases, death was caused by a simultaneous severe lesion of the brain, the patients dying in from a few hours to 2 days; in an eighth case by meningitis, and in the ninth by unrecognised hæmorrhage from the middle meningeal artery. Of 15 cases of lesions of the cranial base, 5 recovered, and 10 died. Analysing his cases, Dr. Seidler arrives at the following conclusions: 1. Cerebral symptoms in cases of traumatic injuries to the skull constitute an indication for a primary trephining only in the presence of an unmistakable train of symptoms pointing to an intracranial hæmorrhage from the middle meningeal artery. 2. In the absence of the hæmorrhage, no trephining is indicated in cases of subcutaneous fractures of the skull. 3.

Depression of fragments by itself cannot be regarded as an indication for the operation. 4. A possibly early primary trephining should be resorted to, either for arresting intracranial hæmorrhage, or for antiseptic purposes in cases of compound fractures (especially of comminuted, fenestrated, etc.). In the latter, the operation secures a thorough disinfection of the site of fracture, and an as thorough antiseptic management of the wound. The operation includes the removal of free fragments, elevation of depressed pieces, trimming uneven edges, etc. 5. A secondary trephining is indicated even in the presence of symptoms of incipient meningo-encephalitis. The latter may be sometimes cut short by the operation. 6. In subcutaneous fractures, secondary trephining is indicated when there are perfect symptoms of cerebral irritation (epileptoid fits) depending upon depressed fragments. 7. In cases of fractures penetrating into the frontal sinuses, antiseptic tamponade should be preferred to suturing, since the sinuses stand in communication with the nasal cavities through which atmospheric pyogenic microbes may easily enter; besides, supuration of the sinuses becomes more dangerous when the cutaneous wound is closed by sutures. 8. The safest and most reliable hæmostatic means in cases of wounds of cerebral venous sinuses is constituted by plugging the injured sinus. 9. The term "trephining" should be applied only to an artificial opening of an intact skull; the operation on a fractured skull should be named "*débridement*"—*Vratch*, No. 2, 1889.

### III. A New Method of Trepanation of Mastoid Process.

By DR. L. I. MITZKUNER (St. Petersburg). Following the suggestion of Dr. A. A. Tesianoff, of Obukovsky Hospital, Dr. Mitzkuner has carried out a long series of experimental researches with the object of working out a rational method of trepanation of the mastoid bone, the essential idea being to remove the starting point of the operation to a spot higher up and nearer to the tympanic cavity, compared with that selected by Schwarzte and others. If the auricle be dragged well forward, a cutaneous fold just behind it comes to light, under which an osseous ridge can be felt. The shallow depression or furrow separat-